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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,398	04/17/2008	A. A. Josephus Den Ouden	NL03 0102 US	4360
65913	7590	04/06/2011	EXAMINER	
NXP, B.V.			TAN, VIBOL	
NXP INTELLECTUAL PROPERTY & LICENSING				
M/S41-SJ			ART UNIT	PAPER NUMBER
1109 MCKAY DRIVE			2819	
SAN JOSE, CA 95131				
			NOTIFICATION DATE	DELIVERY MODE
			04/06/2011	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/561,398	<b>Applicant(s)</b> DEN OUDEN, A. A. JOSEPHUS	
	<b>Examiner</b> Vibol Tan	<b>Art Unit</b> 2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-8,10 and 13-15 is/are rejected.
- 7) ☒ Claim(s) 3-5,9,11,12,16 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/19/05</u>  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Specification*

#### Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
  - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
  - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are

solved by the applicant's invention. This item may also be titled "Background Art."

- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if

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an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

### ***Drawings***

*Suitable descriptive legends may be used, where necessary for understanding of the drawing, subject to approval by the office.* They should contain as few words as possible. See MPEP 608.02; 37 CFR 184(o).

### ***Claim Objections***

1. Claim 1 recites the limitation "the first power supply" in line 10, and "the second power supply" in line 11. There is insufficient antecedent basis for this limitation in the claim.
2. Claim 11 recites data dependent symbols; but the terms are not found in the specification.
3. Claim 16 recites data-dependent combinations; but the terms are not found in the specification.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 6-8, 10, and 13-15 are rejected under 35 U.S.C. 102 (b) as being anticipated by Pickering et al. (US 2002/0061072).

In claim 1, Pickering et al. teaches all claimed features in Figs. 6-8, a data communication system, comprising: - at least three signal conductors (39-41); - a first and a second power supply terminal (source terminals), for supplying currents of mutually opposite direction to the signal conductors respectively (inherent); - a driver circuit (27) coupled between the power supply terminals and the signal conductors (39-41), the driver circuit being arranged to establish a combination of currents through respective ones of the signal conductors (26 provides control signals to the driver 27) , the driver circuit selecting successive combinations (turns on/off transistors 30-35), depending on information to be transmitted, from a selectable set of combinations (a selectable set of transistors), at least three different of current levels (Fig. 7 shows three different voltage levels which related to three different current levels) to any signal conductor being used in the set, including a current level of current to the signal conductors from the first power supply (current source 28 read as the power supply) and a current level of current from the signal conductors to the second power supply (current source 29 read as the second power supply), a sum of the currents ([0013]; the sum of current is zero) through the signal conductors (conductors 39-41) substantially having a same value for each combination in the set and at least one of the conductors not merely functioning in a differential pair relation with another one of the conductors

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([0013]; the conductor with a zero current is not functioning in a differential pair relation with another one of the conductors).

In claim 2, Pickering et al. further teaches the data communication system according to claim 1, wherein the driver circuit (27) comprises an internal switchable current path (path 30-33, path 31-34, path 32-35) for drawing current from the first power supply terminal (upper source terminal, not labeled) to the second power supply terminal (lower source terminal, not labeled), the driver circuit (27) activating the internal switchable current path depending on the combination being established so that a first and a second net current, from the first (the upper source terminal) and the second power supply terminal (the lower source terminal) to the signal conductors (39-41) plus the internal switchable current path respectively, each remains substantially the same upon switching between different combinations.

In claim 6, Pickering et al. further teaches the data communication system according to claim 1, comprising a first plurality of current sources (transistors 30-32 read as current sources) between the first power supply terminal (the upper source terminal) and respective ones of the signal conductors (39-41) and a second plurality of current sources (transistors 33-35 read as current sources) between the second power supply terminal (the lower source terminal) and respective ones of the signal conductors, the driver circuit (27) controlling the selection of the patterns by controlling which of the current sources supply a unit current to the signal conductors (39-41).

In claim 7, Pickering et al. further teaches the data communication system according to claim 1, the driver circuit (27) being arranged to selectably short circuit

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(when transistors 30 and 33 are both turned on) a part of current sources from the first and second plurality with each other when one or more of the signal conductors draws no net current (the inactive conductor with zero current; [0013]), so that a total current from both power supply terminals remains substantially constant.

In claim 8, Pickering et al. further teaches the data communication system according to claim 1, comprising a receiver circuit (42 in Fig. 8) arranged to decode (43) the information from the currents through the signal conductors (39-41 in Fig. 6) depending on detection whether the currents through the signal conductors deviate from zero and in which direction.

In claim 10, Pickering et al. further teaches the data communication system according to claim 1, arranged to operate according to a protocol in which a first one of the combination of currents (zero) in which no current flows through the power supply current is used as an idle symbol to indicate the absence of data (inactive signal; [0013]).

Method claims 13-15 correspond to detailed circuitry already discussed similarly with regard to claims 1, 2-8 and 10.

### ***Allowable Subject Matter***

6. Claims 3-5, 9, 11, 12, 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vibol Tan whose telephone number is (571) 272-1811. The examiner can normally be reached on Monday-Friday (7:00 AM-4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on (571) 272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vibol Tan/  
Primary Examiner, Art Unit 2819